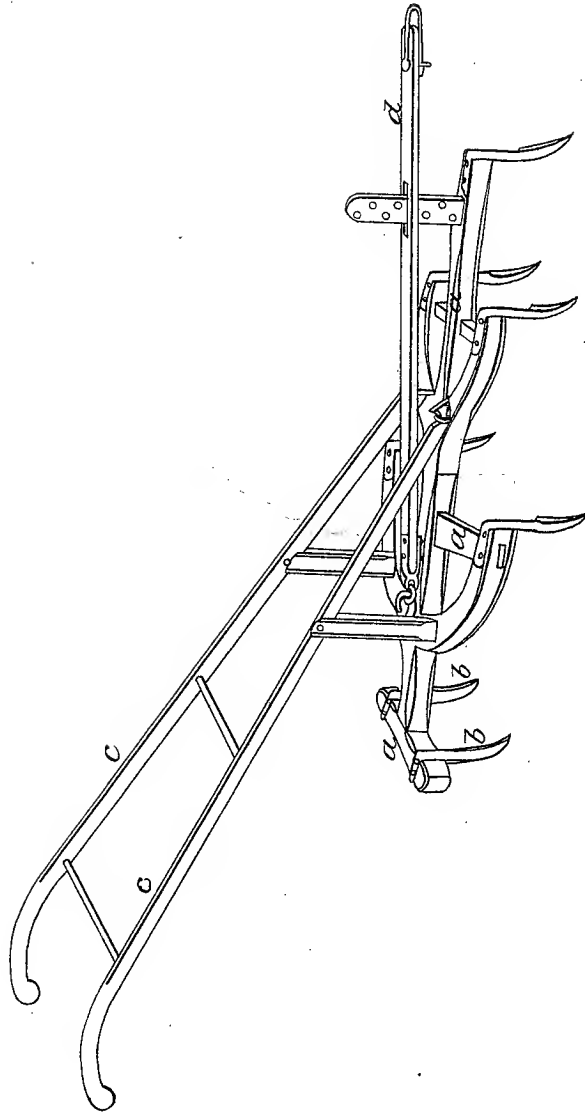


N. I. SHULL.

Cultivator.

Patented Nov. 26, 1836.



# UNITED STATES PATENT OFFICE.

NOAH J. SHULL, OF BENSALEM TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA.

## CULTIVATOR OR HOE-HARROW.

Specification of Letters Patent No. 88, dated November 26, 1836.

*To all whom it may concern:*

Be it known that I, NOAH J. SHULL, of Bensalem township, in the county of Bucks, in the State of Pennsylvania, farmer, have  
5 invented or discovered a new and useful Improvement in Cultivators or Hoe-Harrows to Prevent them from Clogging or Choking; and I do hereby declare that the following is a full and exact description of  
10 the same as invented or improved by me.

The cultivator or hoe-harrow as improved by me is so constructed, by attaching the  
15 hoes or teeth to the front ends or sides of the beams, or other parts of the cultivator or harrow (to which they are secured) that any straw, stones, or other substance which would otherwise choke, or clog up in front  
20 of the hoes or teeth will pass up over the upper ends thereof, and fall off from the cultivator or harrow. To effect this object the shanks or teeth are made so as to extend  
25 up across the front part of the frame to which they are attached, and the upper ends of said shanks are bent back over on to the top of the wood work or frame, to which  
30 they are secured by small bolts passed through the ends of the shanks of the hoes or teeth, and through the frame of the cultivator or harrow.

The front ends, or sides of the frame where the hoes or teeth are attached is so  
35 shaped, and the hoes or teeth so attached, that the front of the upright part or shank will incline back, so that straw, stones, or other substance will more readily pass over  
40 on to the top, to prevent the choking of the harrow.

The frame of the cultivator or hoe-harrow may be made in any convenient shape or  
45 form, provided it is so constructed that the hoes or teeth may be attached as above mentioned to the front end or sides of the different parts of the frame, that is, so that the frame or woodwork shall not extend in  
50 front, over the hoes, or teeth to render it liable to choke. It may be made as follows—let there be a sill or beam extending longitudinally through the center of the frame from the front end to the back, with  
a hoe or tooth attached to the front end in

the manner above described. Passing  
through, or attached, and secured to said  
sill or beam, there will be cross pieces ex-  
tending out a suitable distance each way  
therefrom. The cross pieces may be straight, 55  
with a hoe or tooth attached to the front  
side of the ends thereof in the manner  
aforesaid or the ends of said cross pieces  
may be bent or curved toward the front of  
the cultivator or harrow so that the hoes 60  
or teeth may be attached to the ends thereof,  
the same as the hoe or tooth on the front  
end of the main sill or beam. Such slats  
or braces as may be necessary to give the  
work sufficient strength will be placed in 65  
such places as the particular form, and construction of the other parts of the frame  
may render necessary. The hoes, or teeth  
may all be of the same size or dimensions;  
or for tilling corn, and for other similar 70  
purposes a part of them may be made large  
to act as small plows, and the other of the  
usual size. The stilts or handles, and the  
lever, and other appendages for regulating  
the draft may be fixed in the usual or in 75  
any other convenient manner.

The part claimed as an invention, discovery, or improvement is not the particular  
form or construction of the frame as that  
may be made in any manner which will 80  
admit of the above mode of attaching the  
hoes or teeth—but it is the above described  
form and made of constructing and attaching  
the hoes or teeth (whether large or of  
the common size, to act as plows or as 85  
cultivators) to the front ends or sides of  
the different parts of the frame, so that the  
frame or woodwork shall not extend in front,  
over said hoes or teeth.

The object intended to be attained by the 90  
plan above described is to prevent the liability  
to clog or choke, by straw, sticks,  
stones, or other substances gathering or  
catching on the front of the hoes or teeth  
under the frame or woodwork of the culti- 95  
vator or hoe-harrow.

NOAH J. SHULL.

Witnesses:

DAVID B. LEE,  
M. G. BRYANT.